

In re Application of: Nelson
Serial No.:
Atty. Docket No.: 530-013

Art Group:
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b. detecting the presence of the isolated certain analyte species through the use of a mass spectrometer to determine whether the certain analyte species was present in the specimen; and

c. determining the identity of the certain analyte species via molecular weight analysis.

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48 The method of claim 48, further including the steps of:

a. immobilizing an antibody onto a solid substrate to produce said affinity reagent;

b. combining an effective amount of the affinity reagent with the specimen until the affinity reagent binds with any of the certain analyte species that is present in the specimen to produce a post-combination affinity reagent and an unbound remainder;

c. separating the post-combination affinity reagent from the unbound remainder to form an isolated post-combination affinity reagent;

d. adding a laser desorption/ionization agent to the isolated post-combination affinity reagent to form a mass spectrometric mixture; and

e. mass spectrometrically analyzing the mass spectrometric mixture to produce a mass spectrum, said mass spectrum indicating whether the specimen contained the certain analyte species by exhibiting a mass spectrometric response located at the unique mass-to-charge ratio of the certain analyte species.

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50 The method of claim 49 wherein the step of combining an effective amount of the affinity reagent with the specimen is accomplished using micropipette tip in which there is a filter element to which the affinity reagent is bound.

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51 The method of claim 49 further including the step of adding a disassociation agent to the isolated post-combination affinity reagent prior to the step of adding the laser desorption/ionization agent.

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52 The method of claim 51 wherein the step of combining an effective amount of the affinity reagent with the specimen is accomplished using micropipette tip in which there is a filter element to which the affinity reagent is bound.

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53 A method for determining whether a specimen contains any of one or more certain analyte species, comprising the steps of:

a. capturing and isolating each of the one or more certain analyte species from the specimen, said step of capturing and isolating involving the use of an affinity reagent having a specific affinity for each of the one or more certain analyte species;

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b. detecting the presence of the isolated one or more certain analyte species through the use of a mass spectrometer to determine whether each of the one or more certain analyte species was present in the specimen; and

c. determining the identity of the one or more certain analyte species via molecular weight analysis.

54 The method of claim 53, further including the steps of:

a. immobilizing an antibody onto a solid substrate to produce said affinity reagent;

b. combining an effective amount of the affinity reagent with the specimen until the affinity reagent binds with each of the one or more certain analyte species that is present in the specimen to produce a post-combination affinity reagent and an unbound remainder;

c. separating the post-combination affinity reagent from the unbound remainder to form an isolated post-combination affinity reagent;

d. adding a laser desorption/ionization agent to the isolated post-combination affinity reagent to form a mass spectrometric mixture; and

e. mass spectrometrically analyzing the mass spectrometric mixture to produce a mass spectrum, said mass spectrum indicating whether the specimen contained each of the one or more certain analyte species by exhibiting a mass spectrometric response located at the unique mass-to-charge ratio of each of the certain analyte species.

55 The method of claim 54 wherein the step of combining an effective amount of the affinity reagent with the specimen is accomplished using micropipette tip in which there is a filter element to which the affinity reagent is bound.

56 The method of claim 54 further including the step of adding a disassociation agent to the isolated post-combination affinity reagent prior to the step of adding the laser desorption/ionization agent.

57 The method of claim 56 wherein the step of combining an effective amount of the affinity reagent with the specimen is accomplished using micropipette tip in which there is a filter element to which the affinity reagent is bound.

58 The method of claim 53, further including the steps of:

a. immobilizing a plurality of antibodies onto a solid substrate to produce said affinity reagent;

b. combining an effective amount of the affinity reagent with the specimen until the affinity reagent binds with each of the one or more certain analyte species that is

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present in the specimen to produce a post-combination affinity reagent and an unbound remainder;

c. separating the post-combination affinity reagent from the unbound remainder to form an isolated post-combination affinity reagent;

d. adding a laser desorption/ionization agent to the isolated post-combination affinity reagent to form a mass spectrometric mixture; and

e. mass spectrometrically analyzing the mass spectrometric mixture to produce a mass spectrum, said mass spectrum indicating whether the specimen contained each of the one or more certain analyte species by exhibiting a mass spectrometric response located at the unique mass-to-charge ratio of each of the certain analyte species.

- 59 The method of claim 58 wherein the step of combining an effective amount of the affinity reagent with the specimen is accomplished using micropipette tip in which there is a filter element to which the affinity reagent is bound.
- 60 The method of claim 58 further including the step of adding a disassociation agent to the isolated post-combination affinity reagent prior to the step of adding the laser desorption/ionization agent.
- 61 The method of claim 60 wherein the step of combining an effective amount of the affinity reagent with the specimen is accomplished using micropipette tip in which there is a filter element to which the affinity reagent is bound.


REMARKS

Claim Status

The pending claims have been canceled above. New claims 48-60 have been added. Therefore, claims 48-60 are now pending.

Respectfully submitted,

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